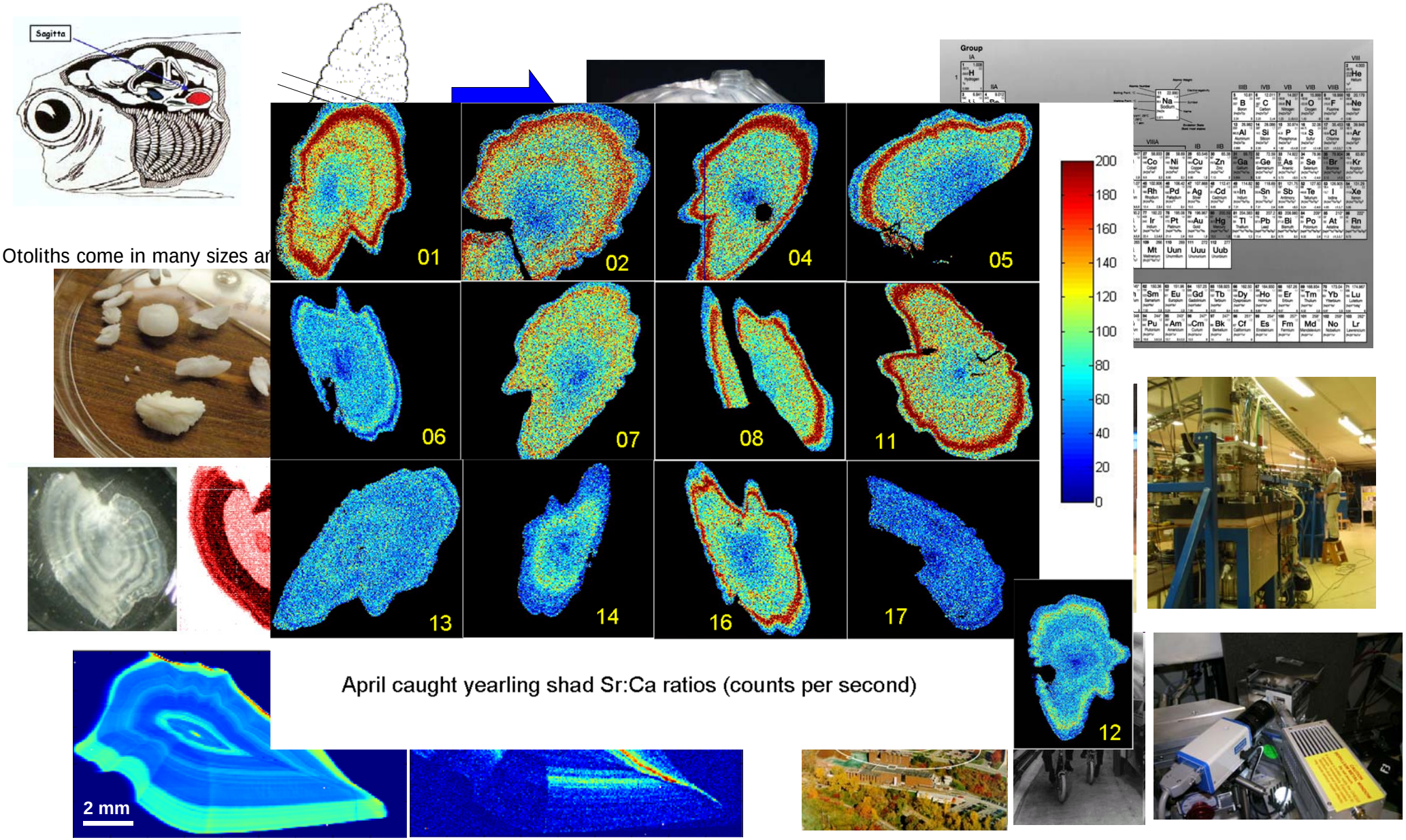
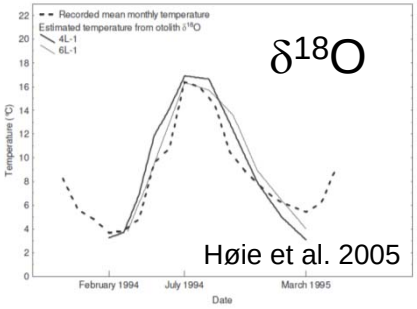
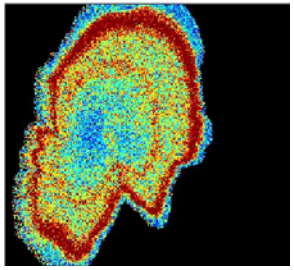

Sagitta
Otoliths come in many sizes ar
01
02
04
05
06
07
08
11
13
14
16
17
12
200
180
160
140
120
100
80
60
40
20
0
April caught yearling shad Sr:Ca ratios (counts per second)
2 mm

Potential for use of otolith chemistry to detect climate change effects

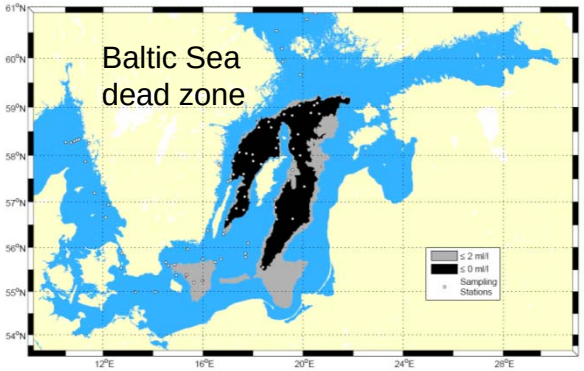
1. Direct thermal histories
(need to correct for salinity)

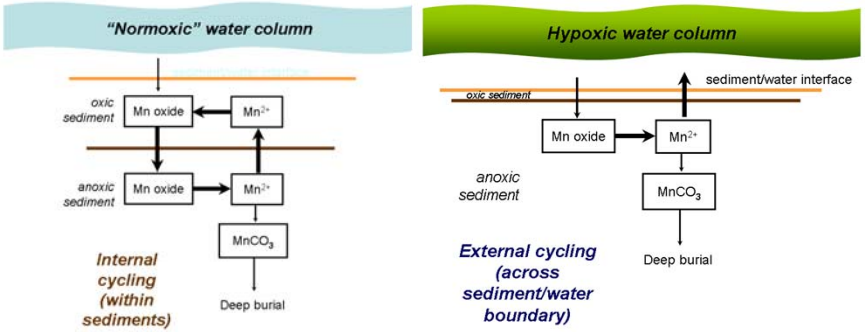


2. Changes in migration timing and habitat use

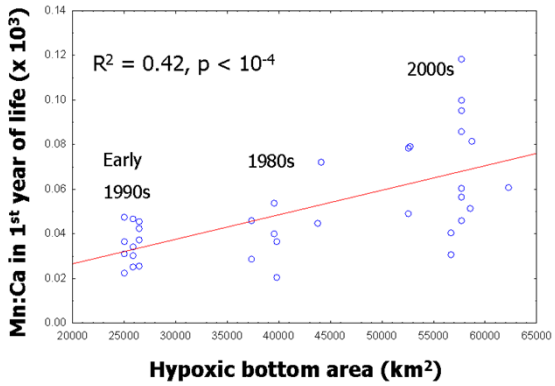


3. Interaction with hypoxia – revealed through Mn uptake (redox dynamics)

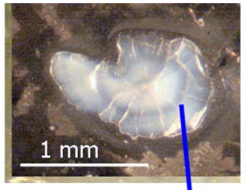
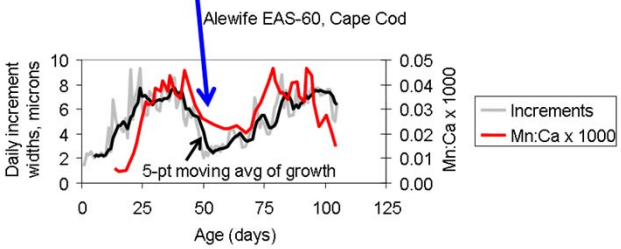




After Slomp et al. (1997)



Limburg et al. PNAS 2011



YOY alewife otolith from an urbanized Cape Cod watershed (Herring Brook) subject to seasonal hypoxia – with no escape…